Melgosa *et al.* Infection and Immunity.(1994) 62:880). An operon encoding the 9 kDa and 60 kDa cysteine-rich outer membrane protein genes has been described (Watson *et al.*, Nucleic Acids Res (1990) 18:5299; Watson *et al.*, Microbiology (1995) 141:2489). Many antigens recognized by immune sera to *C. pneumoniae* are conserved across all *chlamydiae*, but 98 kDa, 76 kDa and several other proteins may be *C. pneumoniae*-specific (Knudsen *et al.* Infect. Immun. 1999. 67:375-383; Perez Melgosa *et al.* Infection and Immunity. 1994. 62:880; Melgosa *et al.*, FEMS Microbiol Lett 1993. 112 :199;, Campbell *et al.*, J. Clin. Microbiol. 1990. 28 :1261; Iijima *et al.*, J. Clin. Microbiol. 1994. 32:583). Antisera to 76kDa and 54kDa antigens have been reported to neutralize *C. pneumoniae in vitro* (Perez Melgosa *et al.* 1994. Infect. Immun. 62:880-886 and Wiedman-Al-Ahmad *et al.* 1997. Clin. Diagn. Lab. Immunol. 4:700-704). An assessment of the number and relative frequency of any *C. pneumoniae* serotypes, and the defining antigens, is not yet possible. The entire genome sequence of *C. pneumoniae* strain CWL-029 is now known and as further sequences become available a better understanding of antigenic variation may be gained.--

Please replace the paragraph beginning at page 10, line 14, with the following rewritten paragraph:

--Figure 2 shows the restriction enzyme analysis of the *C. pneumoniae* OMP (outer membrane protein) gene (SEQ ID NO:1).--

Please replace the paragraph beginning at page 22, line 1, with the following rewritten paragraph:

--A recombinant expression system is selected from procaryotic and eucaryotic hosts. Eucaryotic hosts include yeast cells (*e.g.*, *Saccharomyces cerevisiae* or *Pichia pastoris*), mammalian cells (*e.g.*, COS1, NIH3T3, or JEG3 cells), arthropods cells (*e.g.*, *Spodoptera frugiperda* (SF9) cells), and plant cells. A preferred expression system is a procaryotic host such as *E. coli*. Bacterial and eucaryotic cells are available from a number of different sources including commercial sources to those skilled in the art, *e.g.*, the American Type Culture Collection (ATCC; 10801 University Boulevard, Manassas, VA 20110-2209).

B3 Commercial sources of cells used for recombinant protein expression also provide instructions for usage of the cells.--

Please replace the paragraph beginning at page 48, line 26, with the following rewritten paragraph:

--The OMP (outer membrane protein) gene (SEQ ID NO:1) was amplified from *Chlamydia pneumoniae* genomic DNA by polymerase chain reaction (PCR) using a 5' primer

B4 (5' ATAAGAATGCGGCCGCCACC**ATGGGACTATTCCATCTAACTCTC** 3'; SEQ ID No:3) and a 3' primer (5' GCGCCGGATCC**CCTCCACAATTTTTATGAGTAAGCC** 3'; SEQ ID No:4). The 5' primer contains a Not I restriction site, a ribosome binding site, an initiation codon and a sequence at the 5' end of the OMP (outer membrane protein) coding sequence. The 3' primer includes the sequence encoding the C-terminal sequence of the OMP (outer membrane protein) and a Bam HI restriction site. The stop codon was excluded and an additional nucleotide was inserted to obtain an in-frame fusion with the Histidine tag.--

Please replace the paragraph beginning at page 49, line 14, with the following rewritten paragraph:

--Plasmid pcDNA3.1(-)Myc-His C (Invitrogen) was restricted with Spe I and Bam HI to remove the CMV promoter and the remaining vector fragment was isolated. The CMV promoter and intron A from plasmid VR-1012 (Vical) was isolated on a Spe I / Bam HI fragment. The fragments were ligated together to produce plasmid pCA/Myc-His. The Not I/Bam HI restricted PCR fragment containing the OMP (outer membrane protein) gene (SEQ ID NO:1) was ligated into the Not I and Bam HI restricted plasmid pCA/Myc-His to produce plasmid pCAmgp002 (Figure 3).--